

PHARMACEUTICAL COMPOSITIONS CONTAINING COMPOUNDS
WITH ACTIVITY FOR THE ENHANCEMENT OF ABSORPTION OF
ACTIVE INGREDIENTS

5 The invention described herein refers to pharmaceutical compositions, to the use of compounds as agents with activity for the enhancement of absorption of active ingredients and to specific compounds, all according to the general sections of claims 1, 2, 5, 6 and 10 hereinafter.

10 The problems related to percutaneous absorption of active ingredients in topical and transdermal pharmaceutical presentations (drug delivery systems) is known and has been the subject matter of patents [1] Percutaneous absorption: mechanisms-methodology-drug delivery, 2 Ed., Bronaugh Maibach, MARCEL DEKKER INC.

15 Among the most significant examples reported in scientific literature it is possible to mention the enhancing activity of decylmethylsulfoxide in increasing percutaneous absorption of idoxuridine [2] Touitou, E. (1988), Int. J. Pharm. 43:1. The effect of dodecylazacycloheptan-2-one (Laurocapram, Azone) in enhancing absorption of various molecules was investigated by Stoughton [3] Stoughton, R. B. (1982), Arch. Dermatol. 118: 474 and by Sugibayashi [4] Sugibayashi, K., Hosoya, K. Morimoto, Y., and Higuchi, W. I. (1985), J. Pharm. Pharmacol. 37: 578. Substances made available on the market and initially used in fields other than the pharmaceutical sector, subsequently proved to be of remarkable

importance also for the pharmaceutical industry. Among these, we can find the Perfluoropolyether class of compounds (PFPE) [5] obtained by polymerization of hexafluoropropene with oxygen activated by UV radiation and subsequent treatment to obtain a cosmetic product [6] as an

5 excipient for preparations used in the manufacture of products with a barrier effect [7].

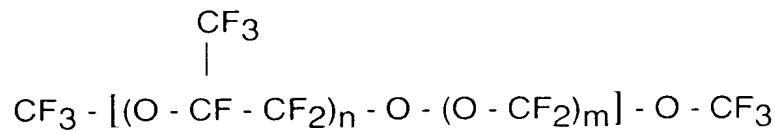
SUMMARY OF THE INVENTION

The following invention consists in the use of PFPE to enhance absorption
10 of pharmacologically active ingredients in topical pharmaceutical presentations and/or in transdermal formulations (drug delivery systems) containing mixtures of at least one active ingredient for the enhancement of absorption.

These compounds, if included in pharmaceutical presentations containing
15 an association or at least one active ingredient, can modify the permeating capacity of the active ingredients through the skin, demonstrating a surprising and unexpected capacity to promote the penetration of the active ingredient.

In accordance with the first aspect of the invention, inclusion of a quantity
20 of PFPE may be applied in traditional topical formulations such as, for example, but not limited to: creams, liquid emulsions, ointments, lotions, microemulsions, foams, gels, aspersion powders; and in transdermal formulations (drug delivery systems).

The term PFPE means molecules with a chemical structure



5 where n/m = 20=40

with molecular weights between 650 and 6250,

C.A.S. name: 1-Propene,1,1,2,3,3,3-hexafluoro-,oxidized and polymerized

C.A.S. number: 69991-67-9

Surprisingly, it was found that inclusion of a quantity of PFPE at

10 concentrations between 0.01% w/w and 60% w/w, in topical and/or transdermal (drug delivery systems) formulations, increases the percutaneous absorption of active ingredients by over 5-20 times their normal value, thus enabling improved absorption and optimization of their systemic effects through suitable pharmaceutical presentations.

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DETAILED DESCRIPTION OF THE INVENTION

Comprehension of the invention is facilitated by the description of a number of assessments on the percutaneous absorption of certain formulations containing different active ingredients.

20 **Example A** illustrates the increase in permeability by approx. 10 times of a formulation containing Troxerutine and 3% PFPE as compared with that of a reference formulation.

Example B demonstrates the correlation between PFPE concentration and percutaneous absorption of formulations containing Nimesulide and increasing concentrations of PFPE.

Example C contains a comparison of the permeation speed of 5 formulations containing non-steroidal antiinflammatory drugs versus formulations to which 3% PFPE has been added.

Example A

Verification of the percutaneous absorption of TROXERUTINE through pig skin using various formulations containing different types of absorption 10 enhancers. In particular, this involved investigation of the release of TROXERUTINE from formulations containing PFPE, Nor-chenodeoxycolic acid and transcutol, versus a reference formulation.

Experimental section:

Apparatus: Franz Cells (manufacturer: Crown Glass Company Inc., New 15 Jersey)

Franz diffusion cells are one of the main systems used for the investigation of ex-vivo permeation. This study involved the use of three cells each with a 9 mm diameter donor compartment corresponding with a diffusion area of 64 mm². 20 The receptor compartment has a capacity of 4.8 ml. The receptor chamber is heated to 37°C±1.

Test system: HPLC, Gilson, Mod. 305 with Spectra Physics detector, Spectra 200 Mod.

Formulations:

	A	B	C	D
Troxerutine	3	3	3	3
Phosphatidylcholine	7	7	7	7
Tocopherol acetate	0.5	0.5	0.5	0.5
Sepigel 305	4	4	4	4
Methyl-p-hydroxybenzoate	0.15	0.15	0.15	0.15
Propyl-p-hydroxybenzoate	0.05	0.05	0.05	0.05
Phenoxyethanol	1	1	1	1
PFPE	3	-	-	-
Nor-chenodeoxycolic acid	-	0.4	-	-
Transcutol	-	-	15	-
Purified water	q.s. to:	100	100	100
				100

Preparation of the skin

The pig skin samples were taken from the internal ear of pigs that had just been sacrificed.

5 The samples were soaked in buffer solution at pH 7.4 for 24 hours at 4°C. The sections of connective tissue and muscle were subsequently removed from the skin and the sample was cut into 2x2 cm squares. The skin samples were stored at -20°C.

HPLC Operating Test Conditions

10 Column: KP 18, 5 micron Licrospher 100
 Mobile phase: 20% acetonitrile 80% phosphate buffer at pH 6.6
 Flow: 1 ml/min
 Pressure: 1.52 Kpsi
 Wavelength: 245 nm

15 RT: 8.51

Procedure

The pig skin is placed between the donor compartment and the receptor chamber with the external skin surface facing the upper compartment. The test formulation is placed inside the donor compartment.

5 The receptor chamber is filled with a phosphate buffer solution at pH 7.4 and at intervals between 0.5 and 8 hours, 2 ml of solution are drawn from this chamber. When each sample is taken fresh buffer solution heated to 37°C is added in order to replenish the initial volume. The samples are then tested using a HPLC method. Each test is repeated three times.

10 Results

The results on percutaneous absorption are summarized in the table below

TIME (h)	mcg of permeated Troxerutine			
	A	B	C	D
0.5	18.89	13.26	8.29	13.7
1	77.48	43.04	17.17	50.51
2	345.29	102.6	58.19	232.84
4	1,289.11	390.80	229.46	636.68
6	3,999.07	614.95	530	1,053.09
8	12,042	1,090	714.6	1,434.90

Conclusions

Formulations B, C, D did not show any difference in absorption, whilst at 15 the eighth hour, formulation A containing PFPE, demonstrated a degree of absorption that was about 9-10 times greater than that of reference formulation D.

Example B

Verification of the absorption of NIMESULIDE through pig skin, using Franz cells, as described in Example A, using various formulations containing different concentrations of PFPE versus a reference formulation.

Formulations:

	A	B	C	D
Nimesulide	5	5	5	5
Lactic acid	2	2	2	2
Ethyl alcohol 95°	4	4	4	4
Glycerine	5	5	5	5
PFPE	-	1.5	3	4.5
Sepigel 305	4	4	4	4
Phosphatidylcholine	2	2	2	2
Methyl-p-hydroxybenzoate	0.15	0.15	0.15	0.15
Propyl-p-hydroxybenzoate	0.05	0.05	0.05	0.05
Purified water q.s. to:	100%	100%	100%	100%

Results

The results on permeability are summarized in the following table

TIME (h)	mcg of permeated Nimesulide			
	A	B	C	D
0.5	0.15	0.16	0.59	0.83
1	0.27	0.39	0.59	1.21
2	0.35	0.72	0.97	1.70
4	0.86	1.14	1.24	1.91
6	1.15	1.54	2.21	2.38
8	1.54	2.24	3.21	3.73
24	3.53	6.00	9.71	9.86

Conclusions

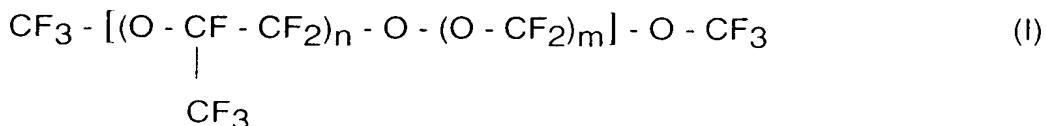
Formulations B, C, D demonstrated an increasing capacity to permeate the skin; this permeating capacity is correlated with the increasing percentage content of PFPE.

5 **Example C**

Verification of absorption after 8 hours, of topical formulations containing antiinflammatory drugs versus formulations which also contain 3% PFPE, through pig skin, using Franz cells, as described in Example A.

Active ingredient contained in the topical formulation	mcg of permeated active ingredient after 8 hours	
	Base formula	Base formula+3% PFPE
Ketoprofen	0.64	5.33
Diclofenac Sodium	1.82	8.66
Ibuprofen	0.21	6.84
Etodollic Acid	0.53	9.93
Piroxicam	1.19	7.94

10 The invention is characterized by the claims at the end of this description. According to the invention the pharmaceutical compositions contain, apart from one or more active ingredient(s), between 0.01 and 60% w/w of the compounds of formula I



with n and m > 18 and < 46 and with molecular weights between ~600 and ~8000, as compounds with activity for the enhancement of active ingredient absorption.

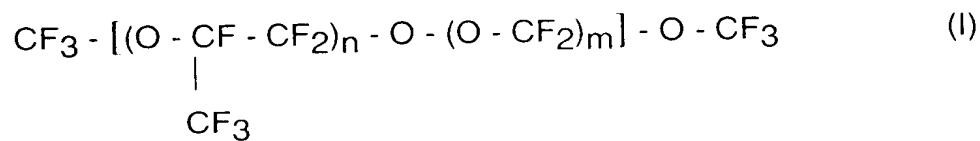
Such pharmaceutical compositions may also contain between 0.01 and

5 20% w/w of Phosphatidylcholine, the compositions preferred are those with 0.1 to 30% w/w of the compounds of formula I with n and m > 24 and < 36 and with molecular weights between 1000 and 4000 and with 0.1 to 10% w/w of Phosphatidylcholine.

They may also contain other compatible ingredients that are present in the

10 form of creams, emulsions, ointments, lotions, foams, gels and transdermal formulations.

The invention also includes the use of the compounds of formula I



with n and m > 18 and < 46, preferably > 24 and < 36, and with molecular weights between ~600 and ~8000, preferably between 1000 and 4000, in pharmaceutical compositions for topical external or internal use for the

enhancement of absorption of active ingredients through the derma, cutis, mucosa, rectum, vagina and urethra, with or without Phosphatidylcholine.

20 In particular, such use regards active ingredients that have anabolic, analgesic, androgenic, anesthetic, anorectics, anthelmintic, antiallergic, antiamebic, antiandrogenic, antianginal, antiarrhythmic,

antiarteriosclerotic, antiarthritic and antirheumatic, antibacterial,
anticholinergic, anticonvulsant, antidepressant, antidiabetic, antidiarrheal,
antidiuretic, antiestrogenic, antibiotic, antiglaucoma, antigonatropic,
antihistaminic, antihyperlipoproteinemic, antihyperthyroid,
5 antihypertensive, anti-inflammatory, antimalarial, antimigraine,
antinauseant, antineoplastic, antiparkinsonian, antiprotozoal, antipruritic,
antipsoriatic, antipsychotic, antipyretic, antiseptic, antispasmodic,
antithrombotic, antitussive, antiulcer, antiviral, anxiolytic, bronchodilator,
CA-blocking or regulating, cardiotonic, stimulating, decongestant, diuretic
10 or enzymatic effect.

More specifically, use of this invention regards Troxerutine and Nimesulide and, also

- 1) **α -Adrenergic agonists such as** Adrafinil. Adrenolone. Amidephrine.
Apraclonidine. Budralazine. Clonidine. Cyclopentamine. Detomidine.
15 Dimetofrine. Dipivefrin. Ephedrine. Epinephrine. Fenoxyazoline.
Guanabenz. Guanfacine. Hydroxyamphetamine. Ibopamine. Indanazoline.
Isometheptene. Mephentermine. Metaraminol. Methoxamine
Hydrochloride. Methylhexaneamine. Metizolene. Midodrine. Naphazoline.
Norepinephrine. Norfenefrine. Octodrine. Octopamine. Oxymetazoline.
20 Phenylephrine Hydrochloride. Phenylpropanolamine Hydrochloride.
Phenylpropylmethylamine. Pholedrine. Propylhexedrine.
Pseudoephedrine. Rilmenidine. Synephrine. Tetrahydrozoline.
Tiamenidine. Tramazoline. Tuaminoheptane. Tymazoline. Tyramine and

Xylometazoline.

2) **β -Adrenergic agonists such as** Albuterol. Bambuterol. Bitolterol.

Carbuterol. Clenbuterol. Clorprenaline. Denopamine. Dioxethedrine. Dopexamine. Ephedrine. Epinephrine. Etafedrine. Ethylnorepinephrine.

5 Fenoterol. Formoterol. Hexoprenaline. Ibopamine. Isoetharine. Isoproterenol. Mabuterol. Metaproterenol. Methoxyphenamine. Oxyfedrine. Pirbuterol. Prenalterol. Procaterol. Protokylol. Reoproterol. Rimiterol. Ritodrine. Soterenol. Terbuterol and Xamoterol.

3) **α -Adrenergic blockers such as** Amosulalol. Arotinolol. Dapiprazole.

10 Doxazosin. Ergoloid Mesylates. Fenspiride. Indoramin. Labetalol. Nicergoline. Prazosin. Terazosin. Tolazoline. Trimazosin and Yohimbine.

4) **β -Adrenergic blockers such as** Acebutolol. Alprenolol. Amosulalol.

15 Arotinolol. Atenolol. Befunolol. Betaxolol. Bevantolol. Bisoprolol. Bopindolol. Bucumolol. Bufetolol. Bufuralol. Bunitrolol. Bupranolol. Butidrine Hydrochloride. Butofilolol. Carazolol. Carteolol. Carvedilol. Celiprolol. Cetamolol. Cloranolol. Dilevalol. Epanolol. Esmolol. Indenolol. Labetalol. Levobunolol. Mepindolol. Metipranolol. Metoprolol. Moprolol. Nadoxolol. Nifenalol. Nipradilol. Oxprenolol. Penbutolol. Pindolol.

20 Practolol. Pronethalol. Propranolol. Sotalol. Sulfinalol. Talinolol. Tertatolol. Timolol. Toliprolol and Xibenolol.

5) **Alcohol deterrents such as** Calcium Cyanamide Citrated.

Disulfiram. Nadide and Nitrefazole.

6) **Aldose reductase inhibitors such as** Epalrestat. Ponalrestat.

Sorbinil and Tolrestat.

7) **Anabolics such as** Androisoxazole. Androstenediol. Bolandiol. Bolasterone. Clostebol. Ethylestrenol. Formyldienolone. 4-Hydroxy-19-nortestosterone. Methandriol. Methenolone. Methyltrienolone. Nandrolone.

5 Nandrolone Decanoate. Nandrolone p-Hexyloxyphenylpropionate. Nandrolone Phenpropionate. Norbolethone. Oxymesterone. Pizotyline. Quinbolone. Stenbolone and Trenbolone.

8) **Analgesics (dental) such as** Chlorobutanol. Clove and Eugenol.

9) **Analgesics (narcotic) such as** Alfentanil. Allylprodine.

10 Alphaprodine. Anileridine. Benzylmorphine. Bezitramide. Buprenorphine. Butorphanol. Clonitazene. Codeine. Codeine Methyl Bromide. Codeine Phosphate. Codeine Sulfate. Desomorphine. Dextromoramide. Dezocine. Diampropamide. Dihydrocodeine. Dihydrocodeinone Enol Acetate. Dihydromorphine. Dimenoxadol. Dimepheptanol. Dimethylthiambutene.

15 Dioxaphetyl Butyrate. Dipipanone. Eptazocine. Ethoheptazine. Ethylmethylthiambutene. Ethylmorphine. Etonitazene. Fentanyl. Hydrocodone. Hydromorphone. Hydroxypethidine. Isomethadone. Ketobemidone. Levorphanol. Lofentanil. Meperidine. Meptazinol. Metazocine. Methadone Hydrochloride. Metopon. Morphine. Morphine

20 Derivatives. Myrophine. Nalbuphine. Narceine. Nicomorphine. Norlevorphanol. Normethadone. Normorphine. Norpipanone. Opium. Oxycodone. Oxymorphone. Papaveretum. Pentazocine. Phenadoxone. Phenazocine. Phenoperidine. Piminodine. Piritramide. Proheptazine.

Promedol. Properidine. Propiram. Propoxyphene. Sufentanil and Tilidine.

10) Analgesics (non-narcotic) such as Acetaminophen.

Acetaminosalol. Acetanilide. Acetylsalicylic Acid. Alclofenac.

Alminoprofen. Aloxiprin. Aluminum Bis (acetylsalicylate).

5 Aminochlorthenoxyazin. 2-Amino-4-picoline. Aminopropylon. Aminopyrine.

Ammonium Salicylate. Antipyrine. Antipyrine Salicylate. Antrafenine.

Apazone. Aspirin. Benorylate. Benoxaprofen. Benzpiperylon.

Benzydamine. p-Bromoacetanilide. 5-Bromosalicylic Acid Acetate.

Bucetin. Bufexamac. Bumadizon. Butacetin. Calcium Acetylsalicylate.

10 Carbamazepine. Carbetidine. Carbiphene. Carsalam. Chloralantipyrine.

Chlorthenoxazin(e). Choline Salicylate. Cinchophen. Ciramadol.

Clometacin. Cropropamide. Crotethamide. Dexoxadrol. Difenamizole.

Diflunisal. Dihydroxyaluminum Acetylsalicylate. Dipyrocetyl. Dipyrone.

Emorfazone. Enfenamic Acid. Epirizole. Etersalate. Ethenzamide.

15 Ethoxazene. Etodolac. Felbinac. Fenoprofen. Floctafenine. Flufenamic

Acid. Fluoresone. Flupirtine. Fluproquazone. Flurbiprofen. Fosfosal.

Gentisic Acid. Glafenine. Ibufenac. Imidazole Salicylate. Indomethacin.

Indoprofen. Isofezolac. Isoladol. Isonixin. Ketoprofen. Ketorolac. p-

Lactophenetide. Lefetamine. Loxoprofen. Lysine Acetylsalicylate.

20 Magnesium Acetylsalicylate. Methotriimeprazine. Metofoline. Miroprofen.

Morazone. Morpholine Salicylate. Naproxen. Nefopam. Nifenazone.

5'Nitro-2'propoxyacetanilide. Parsalmide. Perisoxal. Phenacetin.

Phenazopyridine Hydrochloride. Phenocoll. Phenopyrazone. Phenyl

Acetylsalicylate. Phenyl Salicylate. Phenylramidol. Pipebuzone. Piperylone.
Prodilidine. Propacetamol. Propyphenazone. Proxazole. Quinine
Salicylate. Ramifenazone. Rimazolium Metilsulfate. Salacetamide. Salicin.
Salicylamide. Salicylamide O-Acetic Acid. Salicylsulfuric Acid. Salsalate.
5 Salverine. Simetride. Sodium Salicylate. Sulfamipyprine. Suprofen.
Talniflumate. Tenoxicam. Terofenamate. Tetradrine. Tinordidine.
Tolfenamic Acid. Tolpronine. Tramadol. Viminol. Xenbucin and Zomepirac.
11) Androgens such as Boldenone. Fluoxymesterone. Mestanolone.
Mesterolone. Methandrostenolone. 17-Methyltestosterone.
10 Methyltestosterone. 17 α -Methyltestosterone 3-Cyclopentyl Enol Ether.
Norethandrolone. Normethandrone. Oxandrolone. Oxymesterone.
Oxymetholone. Prasterone. Stanolone. Stanozolol. Testosterone.
Testosterone 17-Chloral Hemiacetal. Testosterone 17 β -Cypionate.
Testosterone Enanthate. Testosterone Nicotinate. Testosterone Phenyl
15 Acetate. Testosterone Propionate and Tiomesterone.
12) Anesthetics (intravenous) such as Acetamidoeugenol. Alfadolone
Acetate. Alfaxalone. Ambucaine. Amolanone. Amylocaine Hydrochloride.
Benoxydine. Betoxycaine. Biphenamine. Bupivacaine. Butacaine.
Butamben. Butanilicaine. Butethamine. Buthalital Sodium. Butoxycaine.
20 Carticaine. 2-Chloroprocaine Hydrochloride. Cocaethylene. Cocaine.
Cyclomethycaine. Dibucaine Hydrochloride. Dimethisoquin. Dimethocaine.
Diperodon Hydrochloride. Dyclonine. Ecgonidine. Ecgonine. Ethyl
Aminobenzoate. Ethyl Chloride. Etidocaine. Etoxadrol. β -Eucaine.

Euprocin. Fenalcomine. Fomocaine. Hexobarbital. Hexylcaine Hydrochloride. Hydroxydione Sodium. Hydroxyprocaine. Hydroxytetracaine. Isobutyl p-Aminobenzoate. Kentamine. Leucinocaine Mesylate. Levoxadrol. Lidocaine. Mepivacaine. Meprylcaine

5 Hydrochloride. Metabutoxycaine Hydrochloride. Methohexitol Sodium. Methyl Chloride. Midazolam. Myrtecaine. Naepaine. Octacaine. Orthocaine. Oxethazaine. Parethoxycaaine. Phenacaine Hydrochloride. Phencyclidine. Phenol. Piperocaine. Piridocaine. Polidocanol. Pramoxine. Prilocaine. Procaine. Propanidid. Propanocaine. Proparacaine.

10 Propipocaine. Propofol. Propoxycaine Hydrochloride. Pseudococaine. Pyrrocaine. Quinine Urea Hydrochloride. Risocaine. Salicyl Alcohol. Tetracaine Hydrochloride. Thialbarbital. Thimylal. Thiobutabarbital. Thiopental Sodium. Tolycaine. Trimecaine and Zolamine.

13) **Anorectics such as** Aminorex. Amphecloral. Amphetamine.

15 Benzphetamine. Chlorphentermine. Clobenzorex. Cloforex. Clortermine. Cyclexedrine. Dextroamphetamine Sulfate. Diethylpropion. Diphenmethoxidine. N-Ethylamphetamine. Fenbutrazate. Fenfluramine. Fenproporex. Furfurylmethylamphetamine. Levophacetoperate. Mazindol. Mefenorex. Metamfepramone. Methamphetamine. Norpseudoephedrine.

20 Phendimetrazine. Phenmetrazine. Phenpentermine. Phenylpropanolamine Hydrochloride and Picilorex.

14) **Anthelmintics (Cestodes) such as** Arecoline. Aspidin. Aspidinol. Dichlorophen(e). Embelin. Kosin. Napthalene. Niclosamide. Pellertierine.

Pellertierine Tannate and Quinacrine.

15) Anthelmintics (Nematodes) such as Alantolactone. Amoscanate.

Ascaridole. Bephenium. Bitoscanate. Carbon Tetrachloride. Carvacrol.

Cyclobendazole. Diethylcarbamazine. Diphenane. Dithiazanine Iodide.

5 Dymanthine. Gentian Violet. 4-Hexylresorcinol. Kainic Acid. Mebendazole.

2-Naphthol. Oxantel. Papain. Piperazine. Piperazine Adipate. Piperazine

Citrate. Piperazine Eddate Calcium. Piperazine Tartrate. Pyrantel.

Pyrvium Pamoate. α -Santonin. Stilbazium Iodide. Tetrachloroethylene.

Tetramisole. Thiabendazole. Thymol. Thymyl N-Isoamylcarbamate.

10 Triclofenol Piperazine and Urea Stibamine.

16) Anthelmintics (Onchocerca) such as Ivermectin and Suramin

Sodium.

17) Anthelmintics (Schistosoma) such as Amoscanate. Amphotalide.

Antimony Potassium Tartrate. Antimony Sodium Gluconate. Antimony

15 Sodium Tartrate. Antimony Sodium Thioglycollate. Antimony

Thioglycollamide. Becanthone. Hycanthone. Lucanthone Hydrochloride.

Niridazole. Oxamniquine. Praziquantel. Stibocaptate. Stibophen and Urea

Stibamine.

18) Anthelmintics (Trematodes) such as Anthiolimine and

20 Tetrachloroethylene.

19) Antiacne drugs such as Algestone Acetophenide. Azelaic Acid.

Benzoyl Peroxide. Cyoctol. Cyproterone. Motretinide. Resorcinol. Retinoic

Acid and Tetroquinone.

20) **Antiallergics such as** Amlexanox. Astemizole. Azelastine. Cromolyn. Fenpiprane. Histamine. Ibudilast. Nedocromil. Oxatomide. Pentigetide. Poison Ivy Extract. Poison Oak Extract. Poison Sumac Extract. Repirinast. Tranilast. Traxanox and Urushiol.

5 21) **Antiamoebics such as** Arsthinol. Bialamicol. Carbarsone. Cephaeline. Chlorbetamide. Chloroquine. Chlorphenoxyamide. Chlortetracycline. Dehydroemetine. Dibromopropamidine. Diloxanide. Diphetarsone. Emetine. Fumagillin. Glucarubin. Glycobiarsol. 8-Hydroxy-7-ido-5-quinolinesulfonic Acid. Iodochlorhydroxyquin. Iodoquinol.

10 Paromomycin. Phanquinone. Phenarsone Sulfoxylate. Polybenzarsol. Propamidine. Quinfamide. Secnidazole. Sulfarside. Teclozan. Tetracycline. Thiocarbamizine. Thiocarbarsone and Tinidazole.

22) **Antiandrogens such as** Bifluranol. Cyoctol. Cyproterone. Delmadinone Acetate. Flutamide. Nilutamide and Oxendolone.

15 23) **Antianginals such as** Acebutolol. Alprenolol. Amiodarone. Amlodipine. Arotinolol. Atenolol. Bepridil. Bevantolol. Bucumolol. Bufetolol. Bufuralol. Bunitrolol. Bupranolol. Carozolol. Carteolol. Carvedilol Celiprolol. Cinepazet Maleate. Diltiazem. Epanolol. Felodipine. Gallopamil. Imolamine. Indenolol. Isosorbide Dinitrate. Isradipine. Limaprost.

20 Mepindolol. Metoprolol. Molsidomine. Nadolol. Nicardipine. Nifedipine. Nifenalol. Nilvadipine. Nipradilol. Nisoldipine. Nitroglycerin. Oxprenolol. Oxyfedrine. Ozagrel. Penbutolol. Pentaerythritol Tetranitrate. Pindolol. Pronethalol. Propranolol. Sotalol. Terodilane. Timolol. Toliprolol and

Verapamil.

24) Antiarrhythmics such as Acebutolol. Acecainide Adenosine.

Ajmaline. Alprenolol. Amiodarone. Amoproxan. Aprindine. Arotinolol. Atenolol. Bevantolol. Bretylium Tosylate. Bucumolol. Bufetolol. Bunaftine. 5 Bunitrolol. Bupranolol. Butidrine Hydrochloride. Butobendine. Capobernic Acid. Carazolol. Carteolol. Cifenline. Cloranolol. Disopyramide. Encainide. Esmolol. Flecainide. Gallopamil. Hydroquinidine. Indecainide. Indenolol. Ipratropium Bromide. Lidocaine. Lorajmine. Lorcainide. Meobentine.

Metipranolol. Mexiletine. Moricizine. Nadoxolol. Nifenalol. Oxprenolol. 10 Penbutolol. Pindolol. Pirmenol. Practolol. Prajmaline. Procainamide Hydrochloride. Pronethalol. Propafenone. Propranolol. Pyrinoline. Quinidine Sulfate. Quinidine. Sotalol. Talinolol. Timolol. Tocainide. Verapamil. Viquidil and Xibenolol.

25) Antiarteriosclerotics such as Pyridinol Carbamate.

15 26) Antiarthritic/Antirheumatics such as Allocupreide Sodium. Auranofin. Aurothioglucose. Aurothioglycanide. Azathioprine. Calcium 3-Aurothio-2-propanol-1-sulfonate. Chloroquine. Clobuzarit. Cuproxoline. Diacerein. Glucosamine. Gold Sodium Thiomalate. Gold Sodium Thiosulfate. Hydroxychloroquine. Kebuzone. Lobenzarit. Melittin.

20 Methotrexate. Myoral and Penicillamine.

27) Antibacterial (antibiotic) drugs, including:

Aminoglycosides such as Amikacin. Apramycin. Arbekacin. Bambermycins. Butirosin. Dibekacin. Dihydrostreptomycin. Fortimicin(s).

Gentamicin. Isepamicin. Kanamycin. Micronomicin. Neomycin. Neomycin Undecylenate. Netilmicin. Paromomycin. Ribostamycin. Sisomicin. Spectinomycin. Streptomycin. Streptonicozid and Tobramycin; *Amphenicols such as Azidamfenicol. Chloramphenicol. Chloramphenicol Palmitate. Chloramphenicol Pantothenate. Florfenicol and Thiamphenicol; Ansamycins such as Rifamide. Rifampin. Rifamycin and Rifaximin.*

β-Lactams including:

Carbapenems such as Imipenem;

Cephalosporins such as Cefaclor. Cefadroxil. Cefamandole. Cefatrizine.

10 *Cefazedone. Cefazolin. Cefixime. Cefmenoxime. Cefodizime. Cefonicid. Cefoperazone. Ceforanide. Cefotaxime. Cefotiam. Cefpimizole. Cefpiramide. Cefpodoxime Proxetil. Cefroxadine. Cefsulodin. Ceftazidime. Ceftazidime. Ceftriaxone. Cefuroxime. Cefuzonam. Cephacetrile Sodium. Cephalexin. Cephaloglycin.*

15 *Cephaloridine. Cephalosporin. Cephalothin. Cephapirin Sodium. Cephradine and Pivcefalexin;*

Cephamycins such as Cefbuperazone. Cefmetazole. Cefminox. Cefotetan and Cefoxitin;

Monobactams such as Aztreonam. Carumonam and Tigemonam;

20 *Oxacephems such as Flomoxef and Moxolactam;*

Penicillins such as Amidinocillin. Amdinocillin Pivoxil. Amoxicillin. Ampicillin. Apalcillin. Aspoxicillin. Azidocillin. Azlocillin. Bacampicillin. Benzylpenicillinic Acid. Benzylpenicillin Sodium. Carbenicillin. Carfecillin

Sodium. Carindacillin. Clometocillin. Cloxacillin. Cyclacillin. Dicloxacillin. Diphenicillin Sodium. Epicillin. Fenbenicillin. Floxacillin. Hetacillin. Lenampicillin. Metampicillin. Methicillin Sodium. Mezlocillin. Nafcillin Sodium. Oxacillin. Penamecillin. Penethamate Hydriodide. Penicillin G

5 Benethamine. Penicillin G Benzathine. Penicillin G Benzhydrylamine. Penicillin G Calcium. Penicillin G Hydrabamine. Penicillin G Potassium. Penicillin G Procaine. Penicillin N. Penicillin O. Penicillin V. Penicillin V Benzathine. Penicillin V Hydrabamine. Penimepicycline. Phenethicillin Potassium. Piperacillin. Pivampicillin. Propicillin. Quinacillin. Sulbenicillin.

10 Talampicillin. Temocillin and Ticarcillin;
Lincosamides such as Clindamycin and Lincomycin;
Macrolides such as Azithromycin. Carbomycin. Clarithromycin.
Erythromycin. Erythromycin Acistrate. Erythromycin Estolate. Erythromycin Glucoheptonate. Erythromycin Lactobionate. Erythromycin Propionate.

15 Erythromycin Stearate. Josamycin. Leucomycins. Midecamycins. Miokamycin. Oleandomycin. Primycin. Rokitamycin. Rosaramycin. Roxithromycin. Spiramycin and Troleandomycin;
Polypeptides such as Amphomycin. Bacitracin. Capreomycin. Colistin.
Enduracidin. Enviomycin. Fusafungine. Gramicidin(s). Gramicidin S.

20 Mikamycin. Polymyxin. Polymyxin B-Methanesulfonic Acid. Pristinamycin. Ristocetin. Teicoplanin. Thiomectin. Tuberactinomycin. Tyrocidine. Tyrothricin. Vancomycin. Viomycin. Viomycin Pantothenate. Virginiamycin and Zinc Bacitracin;

Tetracyclines such as Apicycline. Chlortetracycline. Clomocycline.
5 *Demeclocycline. Doxycycline. Guamecycline. Lymecycline. Meclocycline.*
Methacycline. Minocycline. Oxytetracycline. Penimepicycline. Pipacycline.
Rolitetracycline. Sancycline. Senociclin and Tetracycline; and
other antibiotics such as Cycloserine. Mupirocin and Tuberin.

5 **28) Antibacterial drugs (synthetic), including:**

2.4-Diaminopyrimidines such as Brodimoprim. Tetroxoprim and Trimethoprim;

10 *Nitrofurans such as Furaltadone. Furazolium Chloride. Nifuradene.*
Nifuratel. Nifurfoline. Nifurpirinol. Nifurprazine. Nifurtoinol and Nitrofurantoin;

15 *Quinolones and Analogs such as Amifloxacin. Cinoxacin. Ciprofloxacin.*
Difloxacin. Enoxacin. Fleroxacin. Flumequine. Lomefloxacin. Miloxacin. Nalidixic Acid. Norfloxacin. Ofloxacin. Oxolinic Acid. Pefloxacin. Pipemidic Acid. Piromidic Acid. Rosoxacin. Temafloxacin and Tosufloxacin;

20 *Sulfonamides such as Acetyl Sulfamethoxypyrazine. Acetyl Sulfisoxazole.*
Azosulfamide. Benzylsulfamide. Chloramine-B. Chloramine-T. Dichloramine T. Formosulfathiazole. N²Formylsulfisomidine. N²-β-D-Glucosylsulfanilamide. Mafenide. 4'-(Methylsulfamoyl) sulfanilanilide. p-Nitrosulfathiazole. Noprylsulfamide. Phthalylsulfacetamide. Phthalylsulfathiazole. Salazosulfadimidine. Succinylsulfathiazole. Sulfabenzamide. Sulfacetamide. Sulfachlorpyridazine. Sulfachrysoidine. Sulfacytine. Sulfadiazine. Sulfadicramide. Sulfadimethoxine. Sulfadoxine.

Sulfaethidole. Sulfaguanidine. Sulfaguanol. Sulfalene. Sulfaloxic Acid.

Sulfamerazine. Sulfameter. Sulfamethazine. Sulfamethizole.

Sulfamethomidine. Sulfamethoxazole. Sulfamethoxypyridazine.

Sulfametrole. Sulfamidochrysoidine. Sulfamoxole. Sulfanilamide.

5 Sulfanilamidomethanesulfonic Acid Triethanolamine Salt. 4-Sulfanilamidosalicylic Acid. N⁴-Sulfanilylsulfanilamide. Sulfanilylurea. N-Sulfanilyl-3,4-xylamide. Sulfanitran. Sulfaperine. Sulfaphenazole.

Sulfaproxyline. Sulfapyrazine. Sulfapyridine. Sulfasomizole.

Sulfasymazine. Sulfathiazole. Sulfathiourea. Sulfatolamide. Sulfisomidine

10 and Sulfisoxazole;

Sulfones such as Acedapsone. Acediasulfone. Acetosulfone Sodium.

Dapsone. Diathymosulfone. Glucosulfone Sodium. Solasulfone.

Succisulfone. Sulfanilic Acid. p-Sulfanilylbenzylamine. p,p'-Sulfonyldianiline-N,N'digalactoside. Sulfoxone Sodium and Thiazolsulfone;

15 and

others such as Clofoctol. Hexidine. Methenamine. Methenamine Anhydromethylene-citrate. Methenamine Hippurate. Methenamine Mandelate. Methenamine Sulfosalicylate. Nitroxoline and Xibornol.

29) Anticholinergics such as Adiphenine Hydrochloride. Alverine.

20 Ambutonium Bromide. Aminopentamide. Amixetrine. Amprotropine Phosphate. Anisotropine Methylbromide. Apoatropine. Atropine. Atropine N-Oxide. Benactyzine. Benapryzine. Benzetimide. Benzilonium Bromide. Benztropine Mesylate. Bevonium Methyl Sulfate. Biperiden. Butropium

Bromide. N-Butylscopolammonium Bromide. Buzepide. Camylofine.
Caramiphen Hydrochloride. Chlorbenzoxamine. Chlorphenoxamine.
Cimetropium Bromide. Clidinium Bromide. Cyclodrine. Cyclonium Iodide.
Cycrimine Hydrochloride. Deptropine. Dexetimide. Dibutoline Sulfate.
5 Dicyclomine Hydrochloride. Diethazine. Difemerine. Dihexyverine.
Diphemanil Methylsulfate. N-(1,2-Diphenylethyl)nicotinamide.
Dipiproverine. Diponium Bromide. Emepronium Bromide. Endobenzyline
Bromide. Ethopropazine. Ethybenztrapine. Ethylbenzhydramine.
Etomidoline. Eucatropine. Fenpiverinium Bromide. Fentonium Bromide.
10 Flutropium Bromide. Glycopyrrolate. Heteronium Bromide. Hexocyclium
Methyl Sulfate. Homatropine. Hyoscyamine. Ipratropium Bromide.
Isopropamide. Levomepate. Mecloxamine. Mepenzolate Bromide.
Metcaraphen. Methantheline Bromide. Methixene. Methscopolamine
Bromide. Octamylamine. Oxybutynin Chloride. Oxyphencyclimine.
15 Oxyphenonium Bromide. Pentapiperide. Penthienate Bromide.
Phencarbamide. Phenglutarimide. Pipenzolate Bromide. Piperidolate.
Piperilate. Poldine Methylsulfate. Pridinol. Prifinium Bromide. Procyclidine.
Propantheline Bromide. Propenzolate. Propyromazine. Scopolamine.
Scopolamine N-Oxide. Stilonium Iodide. Stramonium. Sultroponium.
20 Thihexinol. Thiphenamil. Tiemonium Iodide. Timepidium Bromide.
Tiquizium Bromide. Tridihexethyl Iodide. Trihexyphenidyl Hydrochloride.
Tropacine. Tropenzile. Tropicamide. Trospium Chloride. Valethamate
Bromide and Xenytrupium Bromide.

30) **Anticonvulsants such as** Acetylpheneturide. Albutoin. Aloxidine. Aminoglutethimide. 4-Amino-3-hydroxybutyric Acid. Atrolactamide. Beclamide. Buramate. Calcium Bromide. Carbamazepine. Cinromide. Clomethiazole. Clonazepam. Decimemide. Diethadione. Dimethadione.

5 Doxenitoin. Eterobarb. Ethadione. Ethosuximide. Ethotoin. Fluoresone. 5-Hydroxytryptophan. Lamotrigine. Magnesium Bromide. Magnesium Sulfate. Mephenytoin. Mephobarbital. Metharbital. Methetoin. Methylsuximide. 5-Methyl-5-(3-phenanthryl)hydantoin. 3-Methyl-5-phenylhydantoin. Narcobarbital. Nimetazepam. Nitrazepam.

10 Paramethadione. Phenacetamide. Phenetharbital. Pheneturide. Phenobarbital. Phenobarbital Sodium. Phensuximide. Phenylmethylbarbituric Acid. Phenytoin. Phethenylate Sodium. Potassium Bromide. Primidone. Progabide. Sodium Bromide. Solanum. Strontium Bromide. Suclofenide. Sulthiame. Tetrantoin. Trimethadione. Valproic

15 Acid. Valpromide. Vigabatrin and Zonisamide.

31) **Antidepressants, including:**

Bicyclics such as Binedaline. Caroxazone. Citalopram. Dimethazan. Indalpine. Fencamine. Indeloxazine Hydrochloride. Nefopam. Nomifensine. Oxitriptan. Oxypterpine. Paroxetine. Sertraline. Thiazesim.

20 Trazodone and Zometapine;

Hydrazides/Hydrazines such as Benmoxine. Iproclozide. Iproniazid. Isocarboxazid. Nialamide. Octamoxin and Phenelzine;

Pyrrolidones such as Cotinine. Rolicyprine and Rolipram;

Tetracyclics such as Maprotiline. Metralindole. Mianserin and Oxaprotiline; Tricyclics such as Adinazolam. Amitriptyline. Amitriptylinoxide. Amoxapine. Butriptyline. Clomipramine. Demexiptiline. Desipramine. Dibenzepin. Dimetacrine. Dothiepin. Doxepin. Fluacizine. Imipramine. Imipramine N-Oxide. Iprindole. Lofepramine. Melitracen. Metapramine. Nortriptyline.

5 *Noxiptilin. Opipramol. Pizotyline. Propizepine. Protriptyline. Quinupramine. Tianeptine and Trimipramine; and others such as Adrafinil. Benactyzine. Bupropion. Butacetin. Deanol. Deanol Aceglumate. Deanol Acetamidobenzoate. Dioxadrol. Etoperidone.*

10 *Febarbamate. Femoxetine. Fenpentadiol. Fluoxetine. Fluvoxamine. Hematoporphyrin. Hypercinin. Levophacetoperane. Medifoxamine. Minaprine. Moclobemide. Oxaflozane. Piberaline. Prolintane. Pyrisuccideanol. Rubidium Chloride. Sulpiride. Sultopride. Teniloxazine. Thozalinone. Tofenacin. Toloxatone. Tranylcypromine. L-Tryptophan.*

15 *Viloxazine and Zimeldine.*

32) Antidiabetics, including:

Biguanides such as Buformin. Metformin and Phenformin; Hormones such as Glucagon. Insulin. Insulin Injection. Insulin Zinc Suspension. Isophane Insulin Suspension. Protamine Zinc Insulin Suspension and Zinc Insulin Crystals;

20 *Sulfonylurea derivatives such as Acetohexamide. 1-Butyl-3-metanilylurea. Carbutamide. Chlorpropamide. Glibornuride. Gliclazide. Glipizide. Gliquidone. Glisoxepid. Glyburide. Glybuthiazol(e). Glybzole.*

Glyhexamide. Glymidine. Glypinamide. Phenbutamide. Tolazamide.

Tolbutamide and Tolcyclamide; and

others such as Acarbose. Calcium Mesoxalate and Miglitol.

33) Antidiarrheal drugs such as Acetyltannic Acid. Albumin Tannate.

5 Alkofanone. Aluminum Salicylates-Basic. Catechin. Difenoxin. Diphenoxylate. Lidamidine. Loperamide. Mebiquine. Trillium and Uzarin.

34) Antidiuretics such as Desmopressin. Felypressin. Lypressin.

Ornipressin. Oxycinchophen. Pituitary-Posterior. Terlipressin and Vasopressin.

10 **35) Antiestrogens such as** Delmadinone Acetate. Ethamoxytriphetol. Tamoxifen and Toremifene.

36) Antifungal drugs (antibiotics), including:

Polyenes such as Amphotericin-B. Candicidin. Dermostatin. Filipin. Fungichromin. Hachimycin. Hamycin. Lucensomycin. Mepartricin.

15 Natamycin. Nystatin. Pecilocin and Perimycin; and
others such as Azaserine. Griseofulvin. Oligomycins. Neomycin Undecylenate. Pyrrolnitrin. Siccanin. Tubercidin and Viridin.

37) Antifungal drugs (synthetic), including:

Allylamines such as Naftifine and Terbinafine;

20 *Imidazoles such as* Bifonazole. Butoconazole. Chlordanoin. Chlormidazole. Cloconazole. Clotrimazole. Econazole. Enilconazole. Fenticonazole. Isoconazole. Ketoconazole. Miconazole. Omoconazole. Oxiconazole Nitrate. Sulconazole and Tioconazole;

Triazoles such as Fluconazole. Itraconazole and Terconazole; and others such as Acrisorcin. Amorolfine. Biphenamine. Bromosalicylchloranilide. Buclosamide. Calcium Propionate. Chlorphenesin. Ciclopirox. Cloxyquin. Coparaffinate. Diamthazole 5 Dihydrochloride. Exalamide. Flucytosine. Halethazole. Hexetidine. Loflucarban. Nifuratel. Potassium Iodide. Propionic Acid. Pyrithione. Salicylanilide. Sodium Propionate. Sultentine. Tenonitrozole. Tolciclate. Tolindate. Tolnaftate. Triacetin. Ujothion. Undecylenic Acid and Zinc Propionate.

10 38) Antiglaucoma drugs such as Acetazolamide. Befunolol. Betaxolol. Bupranolol. Carteolol. Dapiprazole. Dichlorphenamide. Dipivefrin. Epinephrine. Levobunolol. Methazolamide. Metipranolol. Pilocarpine. Pindolol and Timolol.

39) Antigonadotropins such as Danazol. Gestrinone and 15 Paroxypropione.

40) Antigout drugs such as Allopurinol. Carprofen. Colchicine. Probenecid and Sulfapyrazone.

41) Antihistamines, including:

Alkylamine derivatives such as Acrivastine. Bampine. Brompheniramine. 20 Chlorpheniramine. Dimethindene. Metron S. Pheniramine. Pyrrobutamine. Thenaldine. Tolpropamine and Triprolidine;

Aminoalkyl ethers such as Bietanautine. Bromodiphenhydramine. Carboxamine. Clemastine. Diphenylpyraline. Doxylamine. Embramine.

Medrylamine. Mephenhydramine. p-Methyldiphenhydramine.

Orphenadrine. Phenyltoloxamine. Piprinhydrinate and Setasine;

Ethylenediamine derivatives such as Alloclamide. p-Bromtripelennamine.

Chloropyramine. Chlorothen. Histapyrrodine. Methafurylene.

5 Methaphenilene. Methapyrilene. Phenbenzamine. Pyrilamine. Talastine.

Thenyldiamine. Thonzylamine Hydrochloride. Tripelennamine and Zolamine;

Piperazines such as Cetirizine. Chlorcyclizine. Cinnarizine. Clocinizine and Hydroxyzine;

10 *Tricyclics, including:*

Phenothiazines such as Ahistan. Etymemazine. Hydroxyzine. N-Hydroxyethylpromethazine Chloride. Isopromethazine. Mequitazine. Promethazine. Pyrathiazine and Thiazinamium Methyl Sulfate; and others such as Azatadine. Clobenzepam. Cyproheptadine. Deptropine.

15 Isothipendyl. Loratadine and Prothipendyl; and

other antihistamines such as Antazoline. Astemizole. Azelastine. Cetoxime. Clemizole. Clobenztrpine. Diphenazoline. Diphenhydramine. Mebhydroline. Phenindamine. Terfenadine and Tritoqualine.

42) Antihyperlipoproteinemics, including:

20 *Aryloxyalkanoic acid derivatives such as Beclobrate. Bezafibrate. Binifibrate. Ciprofibrate. Clinofibrate. Clofibrate. Clofibratc Acid. Etofibrate. Fenofibrate. Gemfibrozil. Nicofibrate. Pirifibrate. Ronifibrate. Simfibrate and Theofibrate;*

Bile acid sequesterants such as Cholestyramine Resin. Colestipol and

Polidexide;

HMG CoA reductase inhibitors such as Lovastatin. Pravastatin Sodium

and Simvastatin;

5 *Nicotinic acid derivatives Aluminum Nicotinate. Acipimox. Niceritrol.*

Nicoclonate. Nicomol and Oxiniacic Acid;

Thyroid hormones and analogs such as Etiroxate. Thyropropic Acid and

Thyroxine; and

others such as Acifran. Azacosterol. Benfluorex. β -Benzalbutyramide.

10 *Carnitine. Chondroitin Sulfate. Clomestrone. Detaxtran. Dextran Sulfate*

Sodium. 5,8,11,14,17-Eicosapentaenoic Acid. Eritadenine. Furazabol.

Meglitol. Melinamide. Mytatrienediol. Ornithine. γ -Oryzanol. Pantethine.

Pentaerythritol Tetraacetate. α -Phenylbutyramide. Pirozadil. Probucol. α -

Pentaerythritol Tetraacetate. α -Phenylbutyramide. Pirozadil. Probucol. α -

Sitosterol. Sultosilic Acid. Piperazine Salt. Tiadenol. Triparanol and

15 *Xenbucin.*

43) Antihypertensive drugs, including:

Arylethanolamine derivatives such as Amosulalol. Bufuralol. Dilevalol.

Labetalol. Pronethalol. Sotalol and Sulfinalol;

Aryloxypropanolamine derivatives such as Acebutolol. Alprenolol.

Arotinolol. Atenolol. Betaxolol. Bevantolol. Bisoprolol. Bopindolol.

Bunitrolol. Bupranolol. Butofilolol. Carazolol. Carteolol. Carvedilol.

Celiprolol. Cetamolol. Epanolol. Indenolol. Mepindolol. Metipranolol.

Metoprolol. Moprolol. Nadolol. Nipradilol. Oxprenolol. Penbutolol. Pindolol.

Propranolol. Talinolol. Tertatolol. Timolol and Toliprolol;

Benzothiadiazine derivatives such as Althiazide. Bendroflumethiazide. Benzthiazide. Benzylhydrochlorothiazide. Buthiazide. Chlorothiazide. Chlorthalidone. Cyclopenthiazide. Cyclothiazide. Diazoxide. Epithiazide.

5 Ethiazide. Fenquizone. Hydrochlorothiazide. Hydroflumethiazide. Methyclothiazide. Meticrane. Metolazone. Paraflutizide. Polythiazide. Tetrachlormethiazide and Trichlormethiazide;

N-Carboxyalkyl (peptide/lactam) derivatives such as Alacepril. Captopril. Cilazapril. Delapril. Enalapril. Enalaprilat. Fosinopril. Lisinopril. Moveltipril.

10 Perindopril. Quinapril and Ramipril;

Dihydropyridine derivatives such as Amlodipine. Felodipine. Isradipine. Nicardipine. Nifedipine. Nilvadipine. Nisoldipine and Nitrendipine;

Guanidine derivatives such as Bethanidine. Debrisoquin. Guanabenz. Guanacline. Guanadrel. Guanazodine. Guanethidine. Guanfacine.

15 Guanochlor. Guanoxabenz and Guanoxan;

Hydrazines and phthalazines such as Budralazine. Cadralazine. Dihydralazine. Endralazine. Hydracarbazine. Hydralazine. Pheniprazine. Pildralazine and Todralazine;

Imidazole derivatives such as Clonidine. Lofexidine. Phentolamine.

20 Tiamenidine and Tolonidine;

Quaternary ammonium compounds Azamethonium Bromide. Chlorisondamine Chloride. Hexamethonium. Pentacyinium Bis(methyl sulfate). Pentamethonium Bromide. Pentolinium Tartate. Phenactopinium

Chloride and Trimethidinium Methosulfate;

Quinazoline derivatives such as Alfuzosin. Bunazosin Doxazosin.

Prazosin. Terazosin and Trimazosin;

Reserpine derivatives such as Bietaserpine. Deserpidine. Rescinnamine.

5 Reserpine and Syrosingopine;

Sulfonamide derivatives such as Ambuside. Clopamide. Furosemide.

Indapamide. Quinethazone. Tripamide and Xipamide; and

others such as Ajmaline. γ -Aminobutyric Acid. Bufeniode. Chlorthalidone.

Cicletanine. Ciclosidomine. Cryptenamine Tannates. Fenoldopam.

10 Flosequinan. Indoramin. Ketanserin. Mebutamate. Mecamylamine.

Methyldopa. Methyl 4-Pyridyl Ketone Thiosemicarbarzone. Metolazone.

Minoxidil. Muzolimine. Pargyline. Pempidine. Pinacidil. Piperoxan.

Primaperone. Protoveratrines. Raubasine. Rescimetol. Rilmenidene.

Saralasin. Sodium Nitroprusside. Ticrynafen. Trimethaphan Camsylate.

15 Tyrosinase and Urapidil.

44) Antihyperthyroids such as 2-Amino-4-methylthiazole. 2-

Aminothiazole. Carbimazole. 3,5-Dibromo-L-tyrosine. 3,5-Diiodotyrosine.

Hinderin. Iodine. Iothiouracil. Methimazole. Methylthiouracil.

Propylthiouracil. Sodium Perchlorate. Thibenzazoline. Thiobarbital and 2-

20 Thiouracil.

45) Antihypotensive drugs such as Amezinium Methyl Sulfate.

Angiotensin Amide. Dimetofrine. Dopamine. Etifelmin. Etilefrin. Gepefrine.

Metaraminol. Midodrine. Norepinephrine. Pholedrine and Syneprine.

46) **Antihypothyroid drugs such as** Levothyroxine Sodium. Liothyonine. Thyroid. Thyroidin. Thyroxine. Tiratricol and TSH.

47) **Anti-Inflammatory (non-steroidal) drugs, including:**

Aminoarylcarboxylic acid derivatives such as Enfenamic Acid.

5 Etofenamate. Flufenamic Acid. Isonixin. Meclofenamic Acid. Mefenamic Acid. Niflumic Acid. Talniflumate. Terofenamate and Tolfenamic Acid;

Arylacetic acid derivatives such as Acemetacin. Alclofenac. Amfenac. Bufexamac. Cinmetacin. Clopirac. Diclofenac Sodium. Etodolac. Felbinac. Fenclofenac. Fenclorac. Fenclozic Acid. Fentiazac. Glucametacin.

10 Ibufenac. Indomethacin. Isofezolac. Isoxepac. Lonazolac. Metiazinic Acid. Oxametacine. Proglumetacin. Sulindac. Tiaramide. Tolmetin and Zomepirac;

Arylbutyric acid derivatives such as Bumadizon. Butibufen. Fenbufen and Xenbucin;

15 *Arylcarboxylic acid such as* Clidanac. Ketorolac and Tinoridine;

Arylpropionic acid derivatives such as Alminoprofen. Benoxaprofen. Bucloxic Acid. Carprofen. Fenoprofen. Flunoxaprofen. Flurbiprofen. Ibuprofen. Ibuproxam. Indoprofen. Ketoprofen. Loxoprofen. Miroprofen. Naproxen. Oxaprozin. Piketoprofen. Pirprofen. Pranoprofen. Protizinic

20 Acid. Suprofen and Tiaprofenic Acid;

Pyrazoles such as Difenamizole and Epirizole;

Pyrazolones such as Apazone. Benzpiperylon. Feprazone. Mofebutazone. Morazone. Oxyphenbutazone. Phenylbutazone. Pipebuzone.

Propyphenazone. Ramifenazone. Suxibuzone and Thiazolinobutazone;
Salicylic acid derivatives such as Acetaminosalol. Aspirin. Benorylate.
 Bromosaligenin. Calcium Acetylsalicylate. Diflunisal. Etersalate. Fendosal.
 Gentisic Acid. Glycol Salicylate. Imidazole Salicylate. Lysine
 5 Acetylsalicylate. Mesalamine. Morpholine Salicylate. 1-Naphthyl Salicylate.
 Olsalazine. Parsalmide. Phenyl Acetylsalicylate. Phenyl Salicylate.
 Salacetamide. Salicylamine O-Acetic Acid. Salicylsulfuric Acid. Salsalate
 and Sulfasalazine;
Thiazinecarboxamides such as Droxicam. Isoxicam. Piroxicam and
 10 Tenoxicam; and
others such as ϵ -Acetamidocaproic Acid. S-Adenosylmethionine. 3-Amino-
 4-hydroxybutyric Acid. Amixetrine. Bendazac. Benzydamine. Bucolome.
 Difenpiramide. Ditazol. Emorfazole. Guaiazulene. Nabumetone.
 Nimesulide. Orgotein. Oxaceprol. Paranyline. Perisoxal. Pifoxime.
 15 Proquazone. Proxazole and Tenidap.
 48) **Antimalarial drugs such as** Acedapsone. Amodiaquin. Arteether.
 Artemether. Artemisinin. Artesunate. Bebeanine. Berberine. Chirata.
 Chlorguanide. Chloroquine. Chlorproguanil. Cinchona. Cinchonidine.
 Cinchonine. Cycloguanil. Gentiopicrin. Halofantrine. Hydroxychloroquine.
 20 Mefloquine Hydrochloride. 3-Methylarsacetin. Pamaquine. Plasmocid.
 Primaquine. Pyrimethamine. Quinacrine. Quinine. Quinine Bisulfate.
 Quinine Carbonate. Quinine Dihydrobromide. Quinine Dihydrochloride.
 Quinine Ethylcarbonate. Quinine Formate. Quinine Gluconate. Quinine

Hydriodide. Quinine Hydrochloride. Quinine Salicylate. Quinine Sulfate. Quinine Tannate. Quinine Urea Hydrochloride. Quinocide. Quinoline and Sodium Arsenate Dibasic.

49) Antimigraine drugs such as Alipropride. Dihydroergotamine.

5 Ergocornine. Ergocorninine. Ergocryptine. Ergot. Ergotamine. Flumedroxone acetate. Fonazine. Lisuride. Methysergid(e). Oxetorone. Pizotyline and Sumatriptan.

50) Antinauseant drugs such as Acetylleucine Monoethanolamine.

Alizapride. Benzquinamide. Bietanautine. Bromopride. Buclizine. 10 Chlorpromazine. Clebopride. Cyclizine. Dimenhydrinate. Diphenidol. Domperidone. Granisetron. Meclizine. Methallatal. Metoclopramide. Metopimazine. Nabilone. Ondansetron. Oxypendyl. Pipamazine. Piprinhydrinate. Prochlorperazine. Scopolamine. Tetrahydrocannabinols. Thiethylperazine. Thioproperazine and Trimethobenzamide.

15 **51) Antineoplastic drugs, including:**

Alkylating agents, including:

Alkyl sulfonates such as Busulfan. Imrosulfan and Piposulfan;
Aziridines such as Benzodepa. Carboquone. Meturedopa and Uredopa;
Ethylenimines and methylmelamines such as Altretamine.
20 Triethylenemelamine. Triethylenephosphoramide;
Triethylenethiophosphoramide and Trimethylolmelamine;
Nitrogen mustards such as Chlorambucil. Chlornaphazine.
Cyclophosphamide. Estramustine. Ifosfamide. Mechlorethamine.

Mechlorethamine Oxide Hydrochloride. Melphalan. Novembichin.
Phenesterine. Prednimustine. Trofosfamide and Uracil Mustard;
Nitrosoureas such as Carmustine. Chlorozotocin. Fotemustine. Lomustine.
Nimustine and Ranimustine; and
5 *others such as* Dacarbazine. Mannomustine. Mitobronitol. Mitolactol and
Pipobroman;
Antibiotics such as Aclacinomycins. Actinomycin F₁. Anthramycin.
Azaserine. Bleomycins. Cactinomycin. Carubicin. Carzinophilin.
Chromomycins. Dactinomycin. Daunorubicin. 6-Diazo-5-oxo-L-norleucine.
10 Doxorubicin. Epirubicin. Mitomycins. Mycophenolic Acid. Nogalamycin.
Olivomycins. Peplomycin. Plicamycin. Porfiromycin. Puromycin.
Streptonigrin. Streptozocin. Tubercidin. Ubenimex. Zinostatin and
Zorubicin;
Antimetabolites, including:
15 *Folic acid analogs such as* Denopterin. Methotrexate. Pteropterin and
Trimetrexate;
Purine analogs such as Fludarabine. 6-Mercaptopurine. Thiamiprine and
Thioguanine; and
Pyrimidine analogs such as Ancitabine. Azacitidine. 6-Azauridine.
20 Carmofur. Cytarabine. Doxifluridine. Enocitabine. Floxuridine. Fluorouracil
and Tegafur;
Enzymes such as L-Asparaginase; and
others such as Aceglatone. Amsacrine. Bestrabucil. Bisantrene.

Carboplatin. Cisplatin. Defosfamide. Demecolcine. Diaziquone.
Eflornithine. Elliptinium Acetate. Etoglucid. Etoposide. Gallium Nitrate.
Hydroxyurea. Interferon- α . Interferon- β . Interferon- γ . Interleukin-2.
Lentinan. Lonidamine. Mitoguazone. Mitoxantrone. Mopidamol. Nitracrine.

5 Pentostatin. Phenamet. Pirarubicin. Podophyllinic Acid. 2-Ethylhydrazide.
Procarbazine. PSK®. Razoxane. Sizofiran. Spirogermanium. Taxol.
Teniposide. Tenuazonic Acid. Triaziquone. 2,2',2"-Trichlorotriethylamine.
Urethan. Vinblastine. Vincristine and Vindesine.

52) Antineoplastic (hormonal) drugs, including:

10 *Androgens such as* Calusterone. Dromostanolone Propionate.
Epitiostanol. Mepitiostane and Testolactone;
Antiadrenals such as Aminoglutethimide. Mitotane and Trilostane;
Antiandrogens such as Flutamide and Nilutamide; and
Antiestrogens such as Tamoxifen and Toremifene.

15 **53) Antineoplastic adjuncts including folic acid replenishers such as** Folinic Acid.

54) Antiparkinsonian drugs such as Amantadine. Benserazide.
Bietanautine. Biperiden. Bromocriptine. Budipine. Carbidopa. Deprenyl.
Dexetimide. Diethazine. Droxidopa. Ethopropazine. Ethylbenzhydramine.
20 Levodopa. Naxagolide. Pergolide. Piroheptine. Pridinol. Prodipine.
Terguride. Tigloidine and Trihexyphenidyl Hydrochloride.

55) Antipheochromocytoma drugs such as Metyrosine.

Phenoxybenzamine and Phentolamine.

56) **Antipneumocystis drugs such as** Eflornithine. Pentamidine and Sulfamethoxazole.

57) **Antiprostatic hypertrophy drugs such as** Gestonorone Caproate. Mepartocrin. Oxendolone and Proscar®.

5 58) **Antiprotozoal drugs (Leshmania) such as** Antimony Sodium Gluconate. Ethylstibamine. Hydroxystilbamidine. N-Methylglucamine. Pentamidine. Stilbamidine and Urea Stibamine.

59) **Antiprotozoal drugs (Trichomonas) such as** Acetarsone. Aminitroxole. Anisomycin. Azanidazole. Forminitrazole. Furazolidone.

10 Hachimycin. Lauroguadine. Mepartocrin. Metronidazole. Nifuratel. Nifuroxime. Nimorazole. Secnidazole. Silver Picrate. Tenonitroxole and Tinidazole.

60) **Antiprotozoal drugs (Trypanosma) such as** Benznidazole. Eflornithine. Melarsoprol. Nifurtimox. Oxophenarsine. Hydrochloride.

15 Pentamidine. Propamidine. Puromycin. Quinapyramine. Stilbamidine. Suramin Sodium. Trypan Red and Tryparsamide.

61) **Antipuritics such as** Camphor. Cyproheptadine. Dichlorisone. Glycine. Halometasone. 3-Hydroxycamphor. Menthol. Mesulphen. Methdilazine. Phenol. Polidocanol. Risocaine. Spirit of Camphor.

20 Thenaldine. Tolpropamine and Trimeprazine.

62) **Antipsoriatic drugs such as** Acitretin. Ammonium Salicylate. Anthralin. 6-Azauridine. Bergapten(e). Chrysarobin. Etretinate and Pyrogallol.

63) Antipsychotic drugs, including:

Butyrophenones such as Benperidol. Bromperidol. Droperidol. Fluanisone. Haloperidol. Melperone. Moperone. Pipamperone. Spiperone. Timiperone and Trifluperidol;

5 *Phenothiazines such as Acetophenazine. Butaperazine. Carphenazine. Chlorproethazine. Chlorpromazine. Clospirazine. Cyamemazine. Dixyrazine. Fluphenazine. Imiclopazine. Mepazine. Mesoridazine. Methoxypromazine. Metofenazate. Oxaflumazine. Perazine. Pericyazine. Perimethazine. Perphenazine. Piperacetazine. Pipotiazine.*

10 *Prochlorperazine. Promazine. Sulforidazine. Thiopropazate. Thioridazine. Trifluoperazine and Triflupromazine;*

Thioxanthenes such as Chlorprothixene. Clopenthixol. Flupentixol and Thiothixene;

other tricyclics such as Benzquinamide. Carpipramine. Clocapramine.

15 *Clomacran. Clothiapine. Clozapine. Oripipramol. Prothipendyl. Tetrabenazine and Zotepine; and*

others such as Alizapride. Amisulpride. Buramate. Fluspirilene. Molindone. Penfluridol. Pimozide. Spirilene and Sulpiride.

64) Antipyretics such as Acetaminophen. Acetaminosalol. Acetanilide.

20 Aconine. Aconite. Aconitine. Alclofenac. Aluminum Bis(acetylsalicylate). Aminochlorthenoxazin. Aminopyrine. Aspirin. Benorylate. Benzydamine. Berberine. p-Bromoacetanilide. Bufexamac. Bumadizon. Calcium Acetysalicylate. Chlorthenoxazin(e). Choline Salicylate. Clidanac.

Dihydroxyaluminum Acetylsalicylate. Dipirocetyl. Dipyrone. Epirizole.
 Etersalate. Imidazole Salicylate. Indomethacin. Isofezolac. p-
 Lactophenetide. Lysine Acetylsalicylate. Magnesium Acetylsalicylate.
 Meclofenamic Acid. Morazone. Morpholine Salicylate. Naproxen.
 5 Nifenazone. 5'-Nitro-2'propoxyacetanilide. Propoxyacetanilide. Phenacetin.
 Phenicarbazide. Phenocoll. Phenopyrazone. Phenyl Acetylsalicylate.
 Phenyl Salicylate. Pipebuzone. Propacetamol. Propyphenazone.
 Ramifenazone. Salacetamide. Salicylamide O-Acetic Acid. Sodium
 Salicylate. Sulfamipyrine. Tetrandrine and Tinoridine.
 10 **65) Antirickettsial drugs such as p-Aminobenzoic Acid.**
 Chloramphenicol. Chloramphenicol Palmitate. Chloramphenicol
 Pantothenate and Tetracycline.
66) Antiseborrheic drugs such as Chloroxine. 3-O-Lauroylpyridoxol
 Diacetate. Piroctone. Pyrithione. Resorcinol. Selenium Sulfides and
 15 Tioxolone.
67) Antiseptics, including:
Guanidines such as Alexidine. Ambazole. Chlorhexidine and Picloxydine;
Halogens and halogen compounds such as Bismuth Iodide Oxide.
 Bismuth Iodosubgallate. Bismuth Tribromophenate. Bornyl Chloride.
 20 Calcium Iodate. Chlorinated Lime. Cloflucarban. Flurosalan. Iodic Acid.
 Iodine. Iodine Monochloride. Iodine Trichloride. Iodoform. Methenamine
 Tetraiodine. Oxychlorosene. Povidone-Iodine. Sodium Hypochlorite.
 Sodium Iodate. Symclosene. Thymol Iodide. Triclocarban. Triclosan and

Troclosene Potassium;

Mercurial compounds such as Hydrargaphen. Meralein Sodium.

Merbromin. Mercuric Chloride. Mercuric Chloride Ammoniated. Mercuric Sodium p-Phenolsulfonate. Mercuric Succinimide. Mercuric Sulfide Red.

5 Mercurophen. Mercurous Acetate. Mercurous Chloride. Mercurous Iodide. Nitromersol. Potassium Tetraiodomercurate(II). Potassium

Triiodomercurate(II) Solution. Thimerfonate Sodium and Thimerosal;

Nitrofurans such as Furazolidone. 2-(Methoxymethyl)-5-nitrofuran.

Nidroxyzone. Nifuroxime. Nifurzide and Nitrofurazone;

10 *Phenols such as Acetomerocitol. Bithionol. Cadmium Salicylate. Carvacrol. Chloroxylenol. Clorophene. Creosote. Cresol(s). p-Cresol. Fenticlor.*

Hexachlorophene. 1-Naphthyl Salicylate. 2-Naphthyl Salicylate. 2,4,6-Tribromo-m-cresol and 3',4',5-Trichlorosalicylanilide;

Quinolines such as Aminoquinuride. Benzoxiquine. Broxyquinoline.

15 Chloroxine. Chlorquinaldol. Cloxyquin. Ethylhydrocupreine. Euprocin. Halquinol. Hydrastine. 8-Hydroxquinoline. 8-Hydroxquinoline Sulfate and Iodochlorhydroxyquin; and

others such as Aluminum Acetate Solution. Aluminum Subacetate

Solution. Aluminum Sulfate. 3-Amino-4-hydroxybutyric Acid. Boric Acid.

20 Chlorhexidine. Chloroazodin. m-Cresyl Acetate. Cupric Sulfate. Dibromopropamidine. Ichthammol. Negatol®. Noxytiolin. Ornidazole. β -Propiolactone. α -Terpineol.

68) Antispasmodic drugs such as Alibendol. Ambucetamide.

Aminopromazine. Apoatropine. Bevonium Methyl Sulfate. Bietamiverine. Butaverine. Butropium Bromide. N-Butylscopolammonium Bromide. Caroverine. Cimetropium Bromide. Cinnamedrine. Clebopride. Coniine Hydrobromide. Coniine Hydrochloride. Cyclonium Iodide. Difemerine.

5 Diisopromine. Dioxaphetyl Butyrate. Diponium Bromide. Drofenine. Emepronium Bromide. Ethaverine. Feclomine. Fenalamide. Fenoverine. Fenpiprane. Fenpiverinium Bromide. Fentonium Bromide. Flavoxate. Flopropione. Gluconic Acid. Guaiactamine. Hydramitrazine. Hymecromone. Leiopyrrole. Mebeverine. Moxaverine. Nafiverine.

10 Octamylamine. Octaverine. Pentapiperide. Phenamacide Hydrochloride. Phloroglucinol. Pinaverium Bromide. Piperilate. Pipoxolan Hydrochloride. Pramiverin. Prifinium Bromide. Properidine. Propivane. Propyromazine. Prozapine. Racefemine. Rociverine. Spasmolytol. Stilonium Iodide. Sultroponium. Tiemonium Iodide. Tiquizium Bromide. Tiropramide.

15 Trepibutone. Tricromyl. Trifolium. Trimebutine. N,N-1Trimethyl-3,3-diphenyl-propylamine. Tropenzile. Trospium Chloride and Xenytopium Bromide.

69) **Antithrombotic drugs such as** Anagrelide. Argatroban. Cilostazol. Daltroban. Defibrotide. Enoxaparin. Fraxiparine®. Indobufen. Lamoparan.

20 Ozagrel. Picotamide. Plafibrate. Tedelparin. Ticlopidine and Triflusil.

70) **Antitussive drugs such as** Alloclamide. Amicibone. Benproperine. Benzonatate. Bibenzonium Bromide. Bromoform. Butamirate. Butethamate. Caramiphen Ethanedisulfonate. Carbetapentane.

Chlophedianol. Clobutinol. Cloperastine. Codeine. Codeine Methyl Bromide. Codeine N-Oxide. Codeine Phosphate. Codeine Sulfate. Cyclexanone. Dextromethorphan. Dibunate Sodium. Dihydrocodeine. Dihydrocodeinone Enol Acetate. Dimemorfan. Dimethoxanate. α,α -

5 Diphenyl-2-piperidinepropanol. Dropropizine. Drotebanol. Eprazinone. Ethyl Dibunate. Ethylmorphine. Fominoben. Guaiapate. Hydrocodone. Isoaminile. Levoproxyphene. Morclofone. Narceine. Normethadone. Noscapine. Oxeladin. Oxolamine. Pholcodine. Picoperine. Pipazethate. Piperidione. Prenoxydiazine Hydrochloride. Racemethorphan. Taziprinone

10 Hydrochloride. Tipepidine and Zipeprol.

71) **Antiuclerative drugs such as** Aceglutamide Aluminum Complex. ϵ -Acetamidocaproic Acid Zinc Salt. Acetoxolone. Arbabrostil. Benexate Hydrochloride. Bismuth Subcitrate Sol (Dried). Carbenoxolone. Cetraurate. Cimetidine. Enprostil. Esaprazole. Famotidine. Ftaxilide. Gefarnate.

15 Guaiazulene. Irsogladine. Misoprostol. Nizatidine. Omeprazole. Ornoprostil. γ -Oryzanol. Pifarnine. Pirenzepine. Plaunotol. Ranitidine. Rioprostil. Rosaprostol. Rotraxate. Roxatidine Acetate. Sofalcone. Spizofurone. Sucralfate. Teprenone. Trimoprostil. Trithiozine. Troxipide and Zolimidine.

20 72) **Antiurolithic drugs such as** Acetohydroxamic Acid. Allopurinol. Potassium Citrate and Succinimide.

73) **Antivenin drugs such as** Lyovac® Antivenin.

74) **Antiviral drugs, including:**

Purines and pyrimidinones such as Acyclovir. Cytarabine.

Dideoxyadenosine. Dideoxycytidine. Dideoxyinosine. Edoxudine.

Floxuridine. Ganciclovir. Idoxuridine. Inosine Pranobex. MADU.

Trifluridine. Vidarabine and Zidovudine; and

5 others such as Acetylleucine Monoethanolamine. Amantadine.

Amidinomycin. Cuminaldehyde Thiosemicarbazone. Foscarnet Sodium.

Interferon- α . Interferon- β . Interferon- γ . Kethoxal. Lysozyme. Methisazone.

Moroxydine. Podophyllotoxin. Ribavirin. Rimantadine. Stalimycin.

Statolon. Tromantadine and Xenazoic Acid.

10 75) Anxiolytic drugs, including:

Arylpiperazines such as Buspirone. Gepirone and Ipsapirone;

Benzodiazepine derivatives such as Alprazolam. Bromazepam.

Camazepam. Chlordiazepoxide. Clobazam. Clorazepate. Clotiazepam.

Cloxazolam. Diazepam. Ethyl Loflazepate. Etizolam. Fludiazepam.

15 Flutazolam. Flutoprazepam. Halazepam. Ketazolam. Lorazepam.

Loxapine. Medazepam. Metaclazepam. Mexazolam. Nordazepam.

Oxazepam. Oxazolam. Pinazepam. Prazepam and Tofisopam;

Carbamates such as Cyclarbamate. Emylcamate. Hydroxyphenamate.

Meprobamate. Phenprobamate and Tybamate; and

20 others such as Alpidem. Benzoctamine. Captodiamine. Chlormezanone.

Etifoxine. Fluoresone. Glutamic Acid. Hydroxyzine. Mecloralaurea.

Mephenoxalone. Oxanamide. Phenaglycodol. Suriclonine.

76) Benzodiazepine antagonists such as Flumazenil.

77) Bronchodilators, including:

Ephedrine derivatives such as Albuterol. Bambuterol. Bitolterol.

Carbuterol. Clenbuterol. Clorprenaline. Dioxethedrine. Ephedrine.

Epinephrine. Eprozinol. Etafedrine. Ethylnorepinephrine. Fenoterol.

5 *Hexoprenaline. Isoetharine. Isoproterenol. Mabuterol. Metaproterenol. N-Methylephedrine. Pirbuterol. Procaterol. Protokylol. Reoproterol. Rimiterol.*

Soterenol. Terbuterol and Tulobuterol;

Quaternary ammonium compounds such as Bevonium Methyl Sulfate.

Flutropium Bromide. Ipratropium Bromide and Oxitropium Bromide;

10 *Xanthine derivatives such as Acefylline. Acefylline Piperazine.*

Ambuphylline. Aminophylline. Bamifylline. Choline Theophyllinate.

Doxofylline. Dyphylline. Enprofylline. Etamiphyllin. Etofylline. Guaithylline.

Proxyphylline. Theobromine. 1-Theobromineacetic Acid and Theophylline;

and

15 *others such as Fenspiride. Medibazine. Methoxyphenanime and*

Tretoquinol.

78) Calcium channel blockers, including:

Arylalkylamines such as Bepridil. Diltiazem. Fendiline. Gallopanil.

Prenylamine. Terodiline and Verapamil;

20 *Dihydropyridine derivatives such as Felodipine. Isradipine. Nicardipine.*

Nifedipine. Nilvadipine. Nimodipine. Nisoldipine and Nitrendipine;

Piperazine derivatives such as Cinnarizine. Flunarizine and Lidoflazine;

and

others such as Bencyclane. Etafenone and Perhexiline.

79) Calcium regulators such as Calcifediol. Calcitonin. Calcitriol.

Clodronic Acid. Dihydrotachysterol. Elcatonin. Etidronic Acid. Ipriflavone. Pamidronic Acid. Parathyroid Hormone and Teriparatide Acetate.

5 80) Cardiotonics such as Aceylline. Acetyl-digitoxins. 2-Amino-4-picoline. Amrinone. Benfurodil Hemisuccinate. Bucladesine. Cerberoside.

Camphotamide. Convallatoxin. Cymarin. Denopamine. Deslanoside.

Digitalin. Digitalis. Digitoxin. Digoxin. Dobutamine. Dopamine.

Dopexamine. Enoximone. Erythrophleine. Fenalcomine. Gitalin. Gitoxin.

10 10 Glycocyamine. Heptaminol. Hydrastinine. Ibopamine. Lanatosides.

Metamivam. Milrinone. Neriifolin. Oleandrin. Ouabain. Oxyfedrine.

Prenalterol. Proscillarin. Resibufogenin. Scillaren. Scillarenin.

Strophanthin. Sulmazole. Theobromine and Xamoterol.

81) Chelating agents such as Deferoxamine. Ditiocarb Sodium.

15 Eddate Calcium Disodium. Eddate Disodium. Eddate Sodium. Eddate Trisodium. Penicillamine. Pentetate Calcium Trisodium. Pentetic Acid. Succimer and Trientine.

82) Cholecystokinin antagonists such as Proglumide.

83) Cholelitholytic agents such as Chenodiol. Methyl tert-Butyl Ether.

20 Monoctanoic and Ursodiol.

84) Choleretics such as Alibendol. Anethole Trithion. Azintamide.

Cholic Acid. Cicrotoic Acid. Clanobutin. Cyclobutyrol. Cyclovalone.

α -Cynarin(e). Dehydrocholic Acid. Deoxycholic Acid. Dimecrotic Acid. α -

Ethylbenzyl Alcohol. Exiproben. Feguprol. Fencibutirol. Fenipentol.
 Florantyrone. Hymecromone. Menbutone. 3-(o-Methoxyphenyl)-2-phenylacrylic Acid. Metochalcone. Moquizone. Osalmid. Ox Bile Extract.
 4,4'-Oxydi-2-butanol. Piprozolin. Prozapine. 4-Salicyloylmorpholine.

5 Sincalide. Taurocholic Acid. Timonacic. Tocamphyl. Trepibutone and Vanitiolide.

85) Cholinergic agents such as Aceclidine. Acetylcholine Bromide. Acetylcholine Chloride. Aclatonium Napadisilate. Benzpyrinium Bromide. Bethanechol Chloride. Carbachol. Carpronium Chloride. Demecarium

10 Bromide. Dexpanthenol. Diisopropyl Paraoxon. Echothiophate Iodide. Edrophonium Chloride. Eseridine. Furtrethonium. Isoflurophate. Methacholine Chloride. Muscarine. Neostigmine. Oxapropanium Iodide. Physostigmine and Pyridostigmine Bromide.

86) Cholinesterase inhibitors such as Ambenonium Chloride.

15 Distigmine Bromide and Galanthamine.

87) Cholinesterase reactivators such as Obidoxime Chloride and Pralidoxime Chloride.

88) Central nervous system stimulants and agents such as Amineptine. Amphetamine. Amphetaminil. Bemegride. Benzphetamine.

20 Brucine. Caffeine. Chlorphentermine. Clofenciclan. Clortermine. Coca. Demanyl Phosphate. Dexoxadrol. Dextroamphetamine Sulfate. Diethylpropion. N-Ethylamphetamine. Ethamivan. Etifelmin. Etryptamine. Fencamfamine. Fenethylline. Fenozolone. Flurothyl. Hexacyclonate

Sodium. Homocamfin. Mazindol. Mefexamide. Methamphetamine. Methylphenidate. Nikethamide. Pemoline. Pentylenetetrazole. Phendimetrazine. Phenmetrazine. Phentermine. Picrotoxin. Pipradrol. Prolintane and Pyrovalerone.

5 **89) Decongestants such as** Amidephrine. Cafaminol. Cyclopentamine.

Ephedrine. Epinephrine. Fenoxazoline. Indanazoline. Metizoline. Naphazoline. Nordefrin Hydrochloride. Octodrine. Oxymetazoline. Phenylephrine Hydrochloride. Phenylpropanolamine Hydrochloride. Phenylpropylmethylamine. Propylhexedrine. Pseudoephedrine.

10 Tetrahydrozoline. Tymazoline and Xylometazoline.

90) Dental caries prophylaxis such as Sodium Fluoride.

91) Depigmentors such as Hydroquinine. Hydroquinone and Monobenzone.

92) Diuretics, including:

15 *Organomercurials such as* Chlormerodrin. Meralluride. Mercamphamide. Mercaptomerin Sodium. Mercumallylic Acid. Mercumatilin Sodium. Mercurous Chloride and Mersalyl;

Pteridines such as Furterene and Triamterene;

Purines such as Acefylline. 7-Morpholinomethyltheophylline. Pamabrom.

20 Protheobromine and Theobromine;

Steroids such as Canrenone. Oleandrin and Spironolactone;

Sulfonamide derivatives such as Acetazolamide. Ambuside. Azosemide.

Bumetanide. Butazolamide. Chloraminophenamide. Clofenamide.

Clopamide. Clorexolone. Diphenylmethane-4,4'-disulfonamide.

Disulfamide. Ethoxzolamide. Furosemide. Indapamide. Mefruside.

Methazolamide. Piretanide. Quinethazone. Torasemide. Tripamide and Xipamide;

5 *Uracils such as Aminometradine and Amisometradine; others such as Amanozine. Amiloride. Arbutin. Chlorazanil. Ethacrynic Acid. Etozolin. Hydracarbazine. Isosorbide. Mannitol. Metochalcone. Muzolimine. Perhexiline. Ticrynafen and Urea.*

93) **Dopamine receptor agonists such as** Bromocriptine. Dopexamine.

10 *Fenoldopam. Ibopamine. Lisuride. Naxagolide and Pergolide.*

94) **Ectoparasiticides such as** Amitraz. Benzyl Benzoate. Carbaryl. Crotamiton. DDT. Dixanthogen. Isobornyl Thiocyanoacetate-Technical. Lime Sulfurated Solution. Lindane. Malathion. Mercuric Oleate. Mesulphen and Sulphur-Pharmaceutical.

15 **95) Enzymes, including:**

Digestive enzymes such as α -Amylase (Swine Pancreas). Lipase. Pancrelipase. Pepsin and Rennin;

Mucolytic enzymes such as Lysozyme;

Penicillin inactivating enzymes such as Penicillinase; and

20 *Proteolytic enzymes such as Collagenase. Chymopapain. Chymotrypsins. Papain and Trypsin.*

96) **Enzyme inducers (hepatic) such as** Flumecinol.

97) **Estrogens, including:**

Nonsteroidal estrogens such as Benzestrol. Broparoestrol. Chlorotrianisene. Dienestrol. Diethylstilbestrol. Diethylstilbestrol Dipropionate. Dimestrol. Fosfestrol. Hexestrol. Methallenestril and Methestrol; and

5 *Steroidal estrogens such as Colpormon. Conjugated Estrogenic Hormones. Equilenin. Equilin. Estradiol. Estradiol Benzoate. Estradiol 17 β -Cypionate. Estriol. Estrone. Ethinyl Estradiol. Mestranol. Moxestrol. Mytatrienediol. Quinestradiol and Quinestrol.*

98) **Gastric secretion inhibitors such as** Enterogastrone and Octreotide.

10 99) **Glucocorticoids such as** 21-Acetoxypregnенolone. Alclometasone. Algestone. Amcinonide. Beclomethasone. Betamethasone. Budesonide. Chloroprednisone. Clobetasol. Clobetasone. Clocortolone. Cloprednol. Corticosterone. Cortisone. Cortivazol. Deflazacort. Desonide.

15 Desoximetasone. Dexamethasone. Diflorasone. Diflucortolone. Difluprednate. Enoxolone. Fluazacort. Flucoronide. Flumethasone. Flunisolide. Fluocinolone Acetonide. Fluocinonide. Fluocortin Butyl. Fluocortolone. Fluorometholone. Fluperolone Acetate. Fluprednidene Acetate. Fluprednisolone. Flurandrenolide. Formocortal. Halcinonide.

20 Halometasone. Halopredone Acetate. Hydrocortamate. Hydrocortisone. Hydrocortisone Acetate. Hydrocortisone Phosphate. Hydrocortisone 21-Sodium Succinate. Hydrocortisone Tebutate. Mazipredone. Medrysone. Meprednisone. Methylprednisolone. Mometasone Furoate.

Paramethasone. Prednicarbate. Prednisolone. Prednisolone 21-Diethylaminoacetate. Prednisone Sodium Phosphate. Prednisolone Sodium Succinate. Prednisolone Sodium 21-m-Sulfobenzoate. Prednisolone 21-Stearoylglycolate. Prednisolone Tebutate. Prednisolone 21-Trimethylacetate. Prednisone. Prednival. Prednylidene. Prednylidene 21-Diethylaminoacetate. Tixocortal. Triamcinolone. Triamcinolone Acetonide. Triamcinolone Benetonide and Triamcinolone Hexacetonide.

5 **100) Gonad-Stimulating principles such as** Buserelin. Clomiphene. Cyclofenil. Epimestrol. FSH. HCG and LH-RH.

10 **101) Gonadotropic hormones such as** LH and PMSG.

102) Growth hormone inhibitors such as Octreotide and Somatostatin.

103) Growth hormone releasing factors such as Somorelin.

104) Growth stimulants such as Somatotropin.

105) Hemolytic agents such as Phenylhydrazine and Phenylhydrazine Hydrochloride.

15 **106) Heparin antagonists such as** Hexadimethrine Bromide and Protamines.

107) Hepatoprotectants such as S-Adenosylmethionine. Betaine. Catechin. Citiolone. Malotilate. Orazamide. Phosphorylcholine.

20 **108) Immunomodulators such as** Amiprilose. Bucillamine. Ditiocarb Sodium. Inosine Pranobex. Interferon- γ . Interleukin-2. Lentinan. Muroctasin. Platonin. Procodazole. Tetramisole. Thymomodulin.

Thymopentin and Ubenimex.

109) Immunosuppressants such as Azathioprine. Cyclosporins and Mizoribine.

110) Ion exchange resins such as Carbacylic Resins. Cholestyramine Resin. Colestipol. Polidexide. Resodec and Sodium Polystyrene Sulfonate.

111) Lactation stimulating hormone such as Prolactin.

112) LH-RH agonists such as Buserelin. Goserelin. Leuprolide. Nafarelin and Triptorelin.

113) Lipotropic agents such as N-Acetylmethionine. Choline Chloride. Choline Dehydrocholate. Choline Dihydrogen Citrate. Inositol. Lecithin and Methionine.

114) Lupus erythematosus suppressants such as Bismuth Sodium Triglycollamate. Bismuth Subsalicylate. Chloroquine and Hydroxychloroquine.

115) Mineralcorticoids such as Aldosterone. Deoxycorticosterone. Deoxycorticosterone Acetate and Fludrocortisone.

116) Miotic drugs such as Carbachol. Physostigmine. Pilocarpine and Pilocarpus.

117) Monoamine oxidase inhibitors such as Deprenyl. Iproclozide. Iproniazid. Isocarboxazid. Moclobemide. Octamoxin. Pargyline. Phenelzine. Phenoxypropazine. Pivalylbenzhydrazine. Prodipine. Toloxatone and Tranylcypromine.

118) Mucolytic agents such as Acetylcysteine. Bromhexine.

Carbocysteine. Domiodol. Letosteine. Lysozyme. Mecysteine

Hydrochloride. Mesna. Sobrerol. Stepronin. Tiopronin and Tyloxapol.

119) Muscle relaxants (skeletal) such as Afloqualone. Alcuronium.

5 Atracurium Besylate. Baclofen. Benzoctamine. Benzoquinonium Chloride. C-Calebassine. Carisoprodol. Chlormezanone. Chlorphenesin Carbamate. Chlorproethazine. Chlorzoxazone. Curare. Cyclarbamate. Cyclobenzaprine. Dantrolene. Decamethonium Bromide. Diazepam. Eperisone. Fazadinium Bromide. Flumetramide. Gallamine Triethiodide.

10 Hexacarbacholine Bromide. Hexafluorenium Bromide. Idrocilamide. Laudexium Methyl Sulfate. Leptodactyline. Memantine. Mephenesin. Mephenoxalone. Metaxalone. Methocarbamol. Metocurine Iodide. Nimetazepam. Orphenadrine. Pancuronium Bromide. Phenprobamate. Phenylramidol. Pipecurium Bromide. Promoxolane. Quinine Sulfate.

15 Styramate. Succinylcholine Bromide. Succinylcholine Chloride. Succinylcholine Iodine. Suxethonium Bromide. Tetrazepam. Thiocolchicoside. Tizanidine. Tolperisone. Tubocurarine Chloride. Vecuronium Bromide and Zoxazolamine.

120) Narcotic antagonists such as Amiphenazole. Cyclazocine.

20 Levallorphan. Nadide. Nalmefene. Nalorphine. Nalorphine Dinicotinate. Naloxone and Naltrexone.

121) Neuroprotective agents such as Dizocilpine.

122) Nootropic agents such as Aceglutamide. Acetylcarnitine.

Aniracetam. Bifemelane. Exifone. Fipexide. Idebenone. Indeloxazine Hydrochloride. Nizofenone. Oxiracetam. Piracetam. Propentofylline. Pyritinol and Tacrine.

5 **123) Ophthalmic agents such as** 15-ketoprostaglandins.

124) Ovarian hormone such as Relaxin.

125) Oxytocic drugs such as Carboprost. Cargutocin. Deaminooxytocin. Ergonovine. Gemeprost. Methylergonovine. Oxytocin. Pituitary (Posterior). Prostaglandin E₂. Prostaglandin F₂^α and Sparteine.

10 **126) Pepsin inhibitors such as** Sodium Amylosulfate.

127) Peristaltic stimulants such as Cisapride.

128) Progestogens such as Allylestrenol. Anagestone. Chlormadinone Acetate. Delmadinone Acetate. Demegestone. Desogestrel. Dimethisterone. Dydrogesterone. Ethisterone. Ethynodiol. Flurogestone Acetate. Gestodene. Gestonorone Caproate. Haloprogesterone. 17-Hydroxy-16-methylene-progesterone. 17 α -Hydroxyprogesterone. 17 α -Hydroxyprogesterone Caproate. Lynestrenol. Medrogestone.

15 Norethindrone. Medroxyprogesterone. Megestrol Acetate. Melengestrol. Norethindrone. Norethynodrel. Norgesterone. Norgestimate. Norgestrel. Norgestriene. Norgestriene.

20 Norvinisterone. Pentagestrone. Progesterone. Promegestone. Quingestrone and Trengestone.

129) Prolactin inhibitors such as Metergoline.

130) Prostaglandins and prostaglandin analogs such as Arbabrostil.

Carboprost. Enprostil. Gemeprost. Limaprost. Misoprostol. Ornoprostil. Prostacyclin. Prostaglandin E₁. Prostaglandin E₂. Prostaglandin F_{2α}. Rioprostil. Rosaprostol. Sulprostone and Trimoprostil.

5 **131) Protease inhibitors such as** Aprotinin. Camostat. Gabexate and Nafamostat.

132) Respiratory stimulants such as Almitrine. Bemegride. Carbon Dioxide. Cropropamide. Crotethamide. Dimefline. Dimorpholamine. Doxapram. Ethamivam. Fominoben. Lobeline. Mepixanox. Metamivam.

10 **133) Sclerosing agents such as** Ethanolamine. Ethylamine. 2-Hexyldecanoic Acid. Polidocanol. Quinine Bisulfate. Quinine Urea Hydrochloride. Sodium Ricinoleate. Sodium Tetradecyl Sulfate and

15 Tribenoside.

134) Sedatives and hypnotics, including:

Acyclic ureides such as Acecarbromal. Apronalide. Bomisovalum.

Capuride. Carbromal and Ectylurea;

Alcohols such as Chlorhexadol. Ethchlorvynol. Meparfynol. 4-Methyl-5-

20 thiazoleethanol. tert-Pentyl Alcohol and 2,2,2-Trichloroethanol;

Amides such as Butoctamide. Diethylbromoacetamide. Ibroxamide.

Isovaleryl Diethylamide. Niaprazine. Tricetamide. Trimetozine. Zolpidem and Zopiclone;

Barbituric acid derivatives such as Allobarbital. Amobarbital. Aprobarbital. Barbital. Brallobarbital. Butabarbital Sodium. Butalbital. Butallylonal. Butethal. Carbubarb. Cyclobarbital. Cyclopentobarbital. Enallylpropymal. 5-Ehtyl-5-(1-piperidyl) barbituric Acid. 5-Furfuryl-5-isopropylbarbituric Acid.

5 *Heptabarbital. Hexethal Sodium. Hexobarbital. Mephobarbital. Methitural. Narcobarbital. Nealbarbital. Pentobarbital Sodium. Phenallymal. Phenobarbital. Phenobarbital Sodium. Phenylmethylbarbituric Acid. Probarbital. Propallylonal. Proxibarbal. Reposal. Secobarbital Sodium. Talbutal. Tetrabarbital. Vinbarbital Sodium and Vinylbital;*

10 *Benzodiazepine derivatives such as Brotizolam. Doxefazepam. Estazolam. Flunitrazepam. Flurazepam. Haloxazolam. Loprazolam. Lormetazepam. Nitrazepam. Quazepam. Temazepam and Triazolam;*

Bromides such as Ammonium Bromide. Calcium Bromide. Calcium Bromolactobionate. Lithium Bromide. Magnesium Bromide. Potassium Bromide and Sodium Bromide;

15 *Carbamates such as Amyl Carbamate-Tertiary. Ethinamate. Hexapropymate. Meparfynol Carbamate. Novonal and Trichlorourethan;*

Chloral derivatives such as Carbocloral. Chloral Betaine. Chloral Formamide. Chloral Hydrate. Chloralantipyrine. Dichloralphenazone.

20 *Pentaerythritol Chloral and Triclofos;*

Piperidinediones such as Glutethimide. Methyprylon. Piperidione. Pyrithyldione. Taglutimide and Thalidomide;

Quinazolone derivatives such as Etaqualone. Mecloqualone and Methaqualone; and

others such as Acetal. Acetophenone. Aldol. Ammonium Valerate. Amphenidone. d-Bornyl α -Bromoisovalerate. d-Bornyl Isovalerate.

5 **Bromoform. Calcium 2-Ethylbutanoate. Carfinate. α -Chloralose. Clomethiazole. Cypripedium. Doxylamine. Etodroxizine. Etomidate. Fenadiazole. Homofenazine. Hydrobromic Acid. Mecloxamine. Menthyl Valerate. Opium. Paraldehyde. Perlapine. Propiomazine. Rilmazafone. Sodium Oxybate. Sulfonethylmethane and Sulfonmethane.**

10 **135) Thrombolytic agents such as APSAC. Plasmin. Pro-Urokinase. Streptokinase. Tissue Plasminogen Activator and Urokinase.**

136) Thyrotropic hormones such as TRH and TSH.

137) Uricosurics such as Benzbromarone. Ethebenecid. Orotic Acid. Oxycinchophen. Probenecid. Sulfinpyrazone. Ticrynafen and

15 **Zoxazolamine.**

138) Vasodilators (cerebral) such as Bencyclane. Cinnarizine. Citicoline. Cyclandelate. Ciclonicate. Diisopropylamine Dichloroacetate. Eburnamonine. Fenoxedil. Flunarizine. Ibudilast. Ifenprodil. Nafronyl. Nicametate. Nicergoline. Nimodipine. Papaverine. Pentifylline. Tinofedrine.

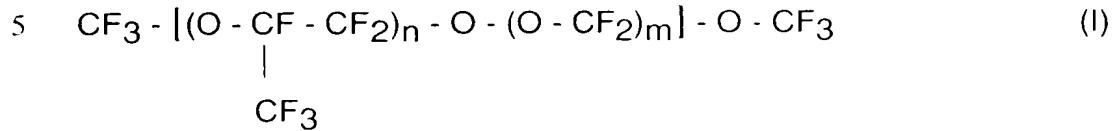
20 **Vincamine. Vinpocetine and Viquidil.**

139) Vasodilators (coronary) such as Amotriphene. Bendazol. Benfurodil Hemisuccinate. Benziodarone. Chloracizine. Chromonar. Clobenfurol. Clonitrate. Dilazep. Dipyridamole. Droprenilamine. Efloxate.

Erythritol. Erythrityl Tetranitrate. Etafenone. Fendiline. Floredil.
 Ganglefene. Hexestrol Bis(β -diethylaminoethyl ether). Hexobendine.
 Itramin Tosylate. Khellin. Lidoflazine. Mannitol Hexanitrate. Medibazine.
 Nicorandil. Nitroglycerin. Pentaerythritol Tetranitrate. Pentrinitrol.
 5 Perhexiline. Pimefylline. Prenylamine. Propatyl Nitrate. Pyridofylline.
 Trapidil. Tricromyl. Trimetazidine. Trolnitrate Phosphate and Visnadine.
140) Vasodilators (peripheral) such as Aluminum Nicotinate. Bamethan.
 Bencyclane. Betahistine. Bradykinin. Brovincamine. Bufoniode. Buflomedil.
 Butalamine. Cetiedil. Ciclonicate. Cinepazide. Cinnarizine. Cyclandelate.
 10 Diisopropylamine Dichloracetate. Eledoisin. Fenoxedil. Flunarizine.
 Heprionate. Ifenprodil. Inositol Niacinate. Isoxsuprine. Kallidin. Kallikrein.
 Moxisylyte. Nafronyl. Nicametate. Nicergoline. Nicofuranose. Nicotinyl
 Alcohol. Nylidrin. Pentifylline. Pentoxyfylline. Piribedil. Prostaglandin E₁.
 Suloctidil and Xanthinol Niacinate.
 15 **141) Vasoprotectants such as** Benzarone. Bioflavonoids. Chromocarb.
 Clobenoside. Diosmin. Dobesilate Calcium. Escin. Folescutol.
 Leucocyanidin. Metescufylline. Quercetin. Rutin and Troxerutin.
142) Vitamins, vitamin sources and vitamin extracts such as Vitamins
 A, B, C, D, E and K and derivatives thereof. Calciferols. Glycyrrhiza and
 20 Mecobalamin.
143) Vulnerary agents such as Acetylcysteine. Allantoin. Asiaticoside.
 Cadexomer Iodine. Chitin. Dextranomer and Oxaceprol.

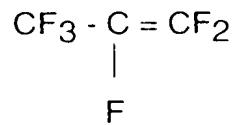
The use referred to herein increases percutaneous absorption of drugs by over 5 times their normal capacity.

Finally, the invention also regards the compounds belonging to the Perfluoropolyester class of formula I



with n and $m > 18$ and < 46 and with molecular weights between ~600 and ~8000, especially those with n and $m > 24$ and < 36 with molecular

10 weights between 1000 and 4000, obtained by polymerization of
hexafluoropropene



15 with UV activated oxygen.